



ICAO ENGINE EXHAUST EMISSIONS DATA SHEET

SUBSONIC ENGINES

ENGINE IDENTIFICATION: PW307A BYPASS RATIO: 4.2
UNIQUE ID NUMBER: 8PW091 PRESSURE RATIO (π_{o0}): 20.2
COMBUSTOR: TALON II
ENGINE TYPE: MTF RATED THRUST (F_{o0}) (kN): 28.5

REGULATORY DATA ** DATA SUPERSEDED ** SEE FOLLOWING UID FOR REVISED DATA: 16PW114

| CHARACTERISTIC VALUE: | HC | CO | NO _x | SMOKE NUMBER |
|--|------|------|-----------------|--------------|
| D _p /F _{o0} (g/kN) or SN | 8.2 | 90.3 | 42.9 | 2.1 |
| AS % OF ORIGINAL LIMIT | 41.8 | 76.5 | 53.3 | 6.3 |
| AS % OF CAEP/2 LIMIT (NO _x) | | | 66.7 | |
| AS % OF CAEP/4 LIMIT (NO _x) | | | 67.1 | |
| AS % OF CAEP/6 LIMIT (NO _x) | | | 67.3 | |
| AS % OF CAEP/8 LIMIT (NO _x) | | | 71.0 | |

DATA STATUS

- PRE-REGULATION
- CERTIFICATION
x REVISED (SEE REMARKS)

TEST ENGINE STATUS

- NEWLY MANUFACTURED ENGINES
x DEDICATED ENGINES TO PRODUCTION STANDARD
- OTHER (SEE REMARKS)

EMISSIONS STATUS

x DATA CORRECTED TO REFERENCE
(ANNEX 16 VOLUME II)

CURRENT ENGINE STATUS

(IN PRODUCTION, IN SERVICE UNLESS OTHERWISE NOTED)
- OUT OF PRODUCTION (DATE: -)
- OUT OF SERVICE (DATE: -)

MEASURED DATA

| MODE | POWER SETTING (%F _{o0}) | TIME (minutes) | FUEL FLOW (kg/s) | HC | CO | NO _x | SMOKE NUMBER |
|--|-----------------------------------|----------------|------------------|-------|-----------|-----------------|--------------|
| TAKE-OFF | 100 | 0.7 | 0.329 | 0.00 | 0.23 | 17.54 | 0.4 |
| CLIMB OUT | 85 | 2.2 | 0.274 | 0.00 | 0.23 | 15.31 | 0.4 |
| APPROACH | 30 | 4.0 | 0.102 | 0.00 | 2.46 | 8.39 | 0.0 |
| IDLE | 7 | 26.0 | 0.045 | 2.89 | 33.07 | 2.20 | 1.9 |
| LTO TOTAL FUEL (kg) or EMISSIONS (g) | | | 144 | 202 | 2378 | 1155 | - |
| NUMBER OF ENGINES | | | | 3 | 3 | 3 | 3 |
| NUMBER OF TESTS | | | | 3 | 3 | 3 | 3 |
| AVERAGE D _p /F _{o0} (g/kN) or AVERAGE SN (MAX) | | | | 7.1 | 83.5 | 40.5 | 1.9 |
| SIGMA (D _p /F _{o0} in g/kN, or SN) | | | | 0.7 | 1.6 | 0.7 | 0.4 |
| RANGE (D _p /F _{o0} in g/kN, or SN) | | | | 6.4-8 | 81.8-85.7 | 39.7-41.3 | 1.5-2.4 |

ACCESSORY LOADS

POWER EXTRACTION 0 (kW)
STAGE BLEED 0 (% CORE FLOW)

AT - POWER SETTINGS
AT - POWER SETTINGS

ATMOSPHERIC CONDITIONS

| | |
|----------------------|---------------|
| BAROMETER (kPa) | 99.3-100.9 |
| TEMPERATURE (K) | 265-280 |
| ABS HUMIDITY (kg/kg) | 0.0017-0.0065 |

FUEL

| | |
|----------|-----------|
| SPEC | Jet A-1 |
| H/C | 1.86-1.89 |
| AROM (%) | 17.4-22.5 |

MANUFACTURER: Pratt & Whitney Canada
TEST ORGANIZATION: PW307 Development Engineering
TEST LOCATION: Mississauga, Ontario, Canada
TEST DATES: 28/12/2004-27/02/2005

REMARKS

1. P&WC ER 5606
2. Engines tested: E9812/12, CH0010/01, CH0011/01
3. Post Type-Certification combustor
4. All engines entering revenue service incorporate this combustor design standard
5. Defined by P&WC Engineering Change D5054

Compliance with Fuel Venting requirements:

x ('x' if complies, 'PR' if pre-regulation,
 '-' if information is not available)